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GREGORY D. CALDWELL
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN
12400 WILSHIRE BLVD
SEVENTH FLOOR
LOS ANGELES, CA 90024

[REDACTED] EXAMINER

CORSARO, NICK

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No. 09/317,802	Applicant(s) Christopher R. Uhlik
Examiner Nick Corsaro	Art Unit 2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Jun 20, 2002

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle* 1835 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 35 and 37-109 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) Claim(s) 35 and 37-90 is/are allowed.

6) Claim(s) 91-109 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requiremen

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 20,22,23
- 4) Interview Summary (PTO-413) Paper No(s). _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other:

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 91-100 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments regarding claims 101-109 filed 06/20/2002 have been fully considered but they are not persuasive.

The applicants feature in claims 101-109 wherein when a priority call is initiated and the call is accommodated by adjusting the SDMA pattern, reads on Linneweh in view Gray as follows.

Linneweh states setting up a reserved channel bank upon demand within several cells in a communication system. Linneweh states that when priority accesses are received the base station controller analyzes the resources of all base stations and adjust frequencies to release resources from the base sites to accommodate the priority call. Linneweh further states that if a priority call is initiated in one cell, the frequency or channel for allocation of the priority request may be taken from not only the base site serving the priority caller but from other base sites, by taking into account all priority requests for all base sites and making a reserve channel bank from the total of base site frequencies. Therefore, Linneweh is stating changing the reuse pattern within the set of base sites. Linneweh further states, that the method is dependent on the air interface

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used. Gray shows an SDMA air interface that is used to accommodate priority calls and can thus modify Linneweh. Therefore the argued limitations read on Linneweh in view of Gray.

Further, the applicants claims recite using SDMA as the air interface for accommodating priority calls. The claims show no other limitations except having a priority system that uses SDMA. Therefore the claims merely show the feature of changing to an SDMA air interface and applying a priority access channel assignment method. A change of air interface is obvious to one skilled in the art as is shown by Linneweh in view of Gray. Since no specific feature of SDMA, except channel allocation, is used in the applicants claims to perform priority channel access, the claim amounts to a change of air interface for allocating channels. Therefore applicants arguments are not persuasive.

Allowable Subject Matter

3. Claims 35, and 37-90 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach a method of facilitating a telephone call in a wireless local loop subscriber unit including: determining whether or not a communication channel is available to service the telephone call; providing a telephone interface with an indication that a channel is not available if it is determined that the channel is not available; receiving a digit of a telephone number even if it is determined that a communication channel is not available; comparing the digit against corresponding digits of one or more emergency codes and if the digits matches excepting further digits of the telephone number and iteratively checking the

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digits against emergency codes to determine if an emergency call is being attempted, and disabling the interface from excepting further digits if it is determined a received digit is not that of an emergency number.

Pentikainen et al. (6,185,412) discloses a procedure for ensuring an emergency call can be made in a wireless local loop system. Pentikainen states activating a wireless local loop terminal and determining if a communication channel is available and if a link is available proceeding with any call as normally would be performed. Pentikainen states, if a channel is not available, generating a different dial tone to indicate that a channel is not available. Pentikainen states that even if a communication channel is not available, excepting digits to determine if an emergency number is being dialed and comparing the dialed number to emergency code to determine if the dialed number is an emergency number. Pentikainen states that if the number is not an emergency number then interrupting the call setup procedure, or if the number is an emergency number continuing with call setup. So Pentikainen is indicating a similar procedure to that of the applicants, however, Pentikainen is not showing how or where the checking procedure is performed, or where the call is interrupted is performed. Pentikainen only shows that the call setup procedure is interrupted. Therefore, Pentikainen does not show enabling the interface of the wireless local loop unit when a channel is not available to except digits of a phone number, where the digits are excepted in series, and comparing the digits individually as received against emergency phone numbers, and at any point in the series, if a digit is determined not to be an emergency phone number, disabling the phone interface from excepting further digits.

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Therefore claims 35, and 37-90 are allowable.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 91-93, and 95-99, are rejected under 35 U.S.C. 103(a) as being unpatentable over Joseph et al. (5,574,977) in view of Ostrup et al. (6,292,664).

Consider claims 91 and 97, Joseph discloses receiving a priority channel request at a communication station from a wireless subscriber unit (see col. 6 lines 49-54). Joseph discloses the priority channel request denoting a priority level call that inherently includes emergency calls (see col. 1 lines 14-20 and col. 6 lines 49-54). Joseph discloses establishing the priority call using a communication channel reserved for priority calls when traditional communication channels are otherwise unavailable (see col. 6 lines 49-64, col. 3 lines 55-60, col. 2 lines 65-67, col. 3 lines 1-8, and col. 3 lines 54-60). Joseph discloses when system capacity reaches a threshold, using a reserved bank of channels wherein obviously the reserved bank of channels could be reduced rate channels (see col. 3 lines 54-60, and col. 6 lines 49-65). Joseph does not specifically disclose using a reserved reduced rate communication channel when traditional channels are unavailable. Ostrup teaches using a reserved reduced rate communication channel

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when traditional channels are unavailable (see col. 4 lines 35-45, col. 1 lines 65-67, col. 1 lines 62-66, and col. 2 lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Joseph, and assign a reserved reduced rate communication channel when traditional channels are unavailable, as taught by Ostrup, thus allowing a system capacity increase by using half rate channels as reserved channels.

Consider claims 92, 93, 95, 98, and 99, Joseph discloses a priority request, as discussed above, with indications to the user (see col. 7 lines 30-45, col. 6 lines 49-67 and col. 7 lines 1-67). Joseph does not specifically disclose using a reduced rate communication channel. Ostrup teaches using a reduced rate communication channel (see col. 4 lines 35-45, col. 1 lines 65-67, col. 1 lines 62-66, and col. 2 lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Joseph, and assign a reduced rate communication channel, as taught by Ostrup, thus allowing acquisition of a channel when an emergency call is placed and using less bandwidth for the reserved channel.

7. Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over Joseph in view of Ostrup as applied to claim 95 above, and further in view of Veerasamy et al. (6,208,865).

Consider claim 96, Joseph and Ostrup do not specifically disclose tearing down a lower priority call. Veerasamy teaches tearing down a lower priority call (see col. 4 lines 55-67 and col. 5 lines 1-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Joseph and Ostrup, and tear down a lower priority call, as taught by Veerasamy, thus allowing allocation of a channel to a priority call.

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8. Claims 94 and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joseph in view of Ostrup as applied to claim 93 and 97 above, and further in view of Gray et al. (6,108,323).

Consider claims 94 and 100, Joseph discloses the communication station and method, as modified by Ostrup above, wherein priority channel assignment is performed to allow freeing of a communication channel. Joseph further discloses that the communication station and method would be dependent on the type of communication system wherein the type determines reuse pattern (see col. 7 lines 30-55). Joseph and Ostrup do not specifically disclose invoking spatial division multiple access (SDMA) processing to free communication channel resources. Gray teaches invoking spatial division multiple access (SDMA) processing to free communication channel resources (see col. 2 lines 40-46, col. 4 lines 25-35, and col. 3 lines 30-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Joseph and Ostrup, and invoke spatial division multiple access (SDMA) processing to free communication channel resources , as taught by Gray, thus allowing acquisition of a channel when an emergency call is placed in an SDMA system.

9. Claims 101-109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linneweh et al. (5,862,485) in view of Gray et al. (6,108,323).

Consider claim 101, Linneweh discloses a method comprising receiving a priority channel request from a wireless subscriber unit (see abstract lines 1-4). Linneweh discloses adjusting a channel reuse pattern of a wireless communication station to free communication

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resources to facilitate a telephone call associated with the priority channel request when other communication channels are not available (see col. 2 lines 34-59, col. 3 lines 35-67, and col. 4 lines 1-20). Linneweh discloses that the adjustment of channel reuse pattern will take place dependent on the type of reuse system, and thus Linneweh inherently discloses adjusting a spatial division multiple access (SDMA) channel reuse pattern of a wireless communication station to free communication resources (see col. 4 line 10-20, and col. 2 lines 34-67). Linneweh does not specifically disclose adjusting a spatial division multiple access (SDMA) channel reuse pattern of a wireless communication station. Gray teaches adjusting a spatial division multiple access (SDMA) channel reuse pattern of a wireless communication station to free communication resources (see col. 2 lines 43-46, col. 4 lines 29-35, and col. 3 lines 24-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Linneweh, and adjusting a spatial division multiple access (SDMA) channel reuse pattern of a wireless communication station to free communication resources, as taught by Gray, thus allowing acquisition of a channel when a priority call is placed in an SDMA system.

Consider claim 106, Linneweh discloses a cellular communication station inherently including two or more antennae (figure 1), therefore Linneweh discloses a communication station including two or more antennae to support wireless communication channels dynamically established between the communication station and one or more subscriber unit(s) in a coverage area supported by the communication station (see col. 3 lines 1-15, col. 2 lines 34-59, col. 3

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lines 35-67, and col. 4 lines 1-20). Linneweh discloses control logic, coupled to the antennae, to control one or more aspects of wireless communication with the subscriber unit(s) including a reuse pattern employed by the communication station, wherein the control logic adjusts the reuse pattern to free a communication channel when a communication channel is otherwise unavailable in response to a priority channel request from a subscriber unit (see col. 2 lines 34-59, col. 3 lines 35-67, and col. 4 lines 1-20). Linneweh discloses that the adjustment of channel reuse pattern will take place dependent on the type of reuse system, and thus Linneweh inherently discloses adjusting a spatial division multiple access (SDMA) channel reuse pattern of a wireless communication station to free communication resources (see col. 4 line 10-20, and col. 2 lines 34-67). Linneweh does not specifically disclose control logic adjusting a spatial division multiple access (SDMA) channel reuse pattern employed by the communication station to free a communication channel. Gray teaches control logic to adjust a spatial division multiple access (SDMA) channel reuse pattern of a wireless communication station to free a communication channel (see col. 2 lines 43-46, col. 4 lines 29-35, and col. 3 lines 24-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Linneweh, and have control logic to adjust a spatial division multiple access (SDMA) channel reuse pattern of a wireless communication station to free communication channel, as taught by Gray, thus allowing acquisition of a channel when a priority call is placed in an SDMA system. .

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Consider claims 102, 103, 104, 105, 108, and 109, Linneweh does not specifically disclose the SDMA processing features utilize adaptive antenna technology to improve channel reuse capability to facilitate multiple communication sessions using a single physical communication channel. Gray teaches the SDMA processing features utilize adaptive antenna technology to improve channel reuse capability to facilitate multiple communication sessions using a single physical communication channel (see col. 2 lines 43-46, col. 4 lines 29-35, and col. 3 lines 24-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Linneweh, and have the SDMA processing features utilize adaptive antenna technology to improve channel reuse capability to facilitate multiple communication sessions using a single physical communication channel , as taught by Gray, thus allowing acquisition of a channel when a priority call is placed in an SDMA system.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Corsaro whose telephone number is (703) 306-5616. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703) 308-6732. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

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(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Nick Corsaro



DANIEL HUNTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600